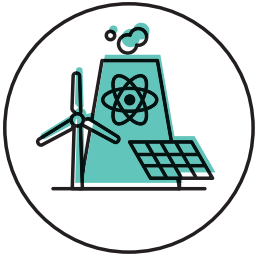
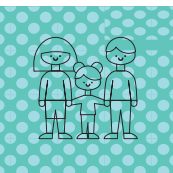


Unleashing the energy revolution

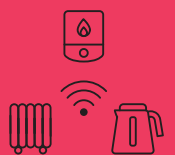
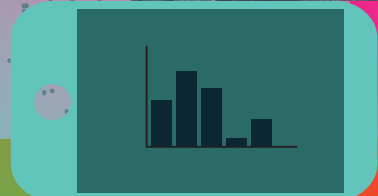




Innovation is fundamental to energy system transformation and economic growth



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Energy Systems Catapult was set up by the UK Government, as part of a world-leading network of innovation centres, with a mission to unleash innovation and open new markets that capture the clean growth opportunity recognised in the Industrial Strategy.

An independent, not-for-profit organisation, ESC takes a whole energy systems view – from power, heat and transport to industry, infrastructure and consumers – bridging the gap between business, academia, and government to identify innovation opportunities and help overcome systemic barriers, to accelerate the decarbonisation of the energy system at least cost.

With 160+ staff based in our Birmingham innovation hub with a variety of commercial, policy and technical backgrounds, we work at local, regional, national and international levels, while acting as an ‘impartial broker’, helping to open-up new markets and promote UK skills and capabilities.

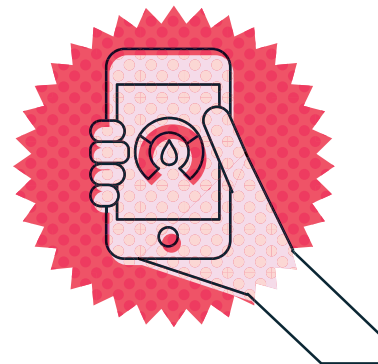


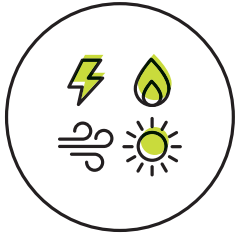
ESC has a unique perspective, which has eased our transition from academic research into early stage commercialisation. Their relationship within the industry enabled us, as a start-up, to identify the right partners for our first development project.

Through focused interventions, they have provided us with bidding support and guidance on leveraging funding to maximise value. They are an accessible ‘sounding board’ for developing our commercialisation strategy. Working with ESC is exciting!



Dr Martin Caton
CEO, Low Carbon Electric

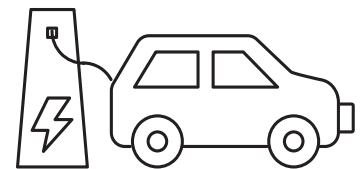




Energy Systems Catapult is underpinned by a growing portfolio of distinct, additional, and complementary capabilities, built around proprietary assets and multidisciplinary teams.

Transformation Insight

The capability to undertake modelling and analysis at national, regional, town and building level, to reveal cost-optimised whole system pathways to meet a given energy system outcome over any selected timeframe and to interpret the findings to aid investment decisions by both the private and public sectors.



Systems Architectures and Integration

The capability to frame new market models, define change management processes, system and technology integration requirements; build market simulation environments to enable innovators, regulators and other stakeholders to work with emerging business models whilst assuring system integrity and coherence.

Design and Governance of Innovation Environments

The capability to support the creation and operation of shared test and demonstration ecosystems to allow sensor-enabled real world trials of innovative technologies and business models in complex simulated future environments.

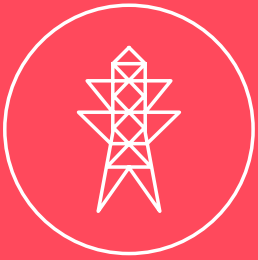
Consumer Insight

The capability to provide innovators with insights for new products, business models and new value propositions by drawing on unique relationships with an existing pool of thousands of energy consumers (qualitative insight complemented with growing datasets revealing real world energy preferences).

Digital and Data

The capability to capture “big data” – particularly on system operation and consumer energy use – and apply Artificial Intelligence and other techniques to deepen insight, identify and evidence commercial value, and enable innovation by others.





Energy Systems Catapult is supporting the UK energy sector to accelerate and scale innovations by developing Service Platforms.

Energy Transformation Town

ESC is scoping the design and governance of a “town-scale” innovation environment alongside industry, policy-makers and regulators to create a national capability. This will allow innovators to test, improve, and scale-up new products, services and business models in real world consumer homes and businesses under safe, affordable, digitalised and new market arrangements.

Catapulting Energy SMEs

ESC is launching a support service to enable high-growth potential innovators to benefit from its assets, capabilities, knowledge and networks. This three-tiered approach includes: **Universal Support** – with guides, knowledge tools and online help for all; **Focussed Support** – partnering with existing incubators to deliver value added technical support direct to innovators; and **Deep-Dive Support** – tailored support for a limited group of very high growth potential SMEs, including linking with investors.

Evidence and Insights

The primary channel for ESC’s analytical, modelling and interpretation capabilities – at building, town, regional, national level – to inform government and private sector decision makers, supporting UK policy and regulatory decisions, innovation investment and the generation of opportunities for UK industry.

International Support

Connecting UK innovators to international expertise and markets, ESC will act as an independent, expert “bridge” between government departments involved in overseas development and trade, UK industry and overseas markets.

Energy Revolution Integration Service

Playing a central role in the Prospering from the Energy Revolution – Industrial Strategy Challenge Fund by delivering project integration, innovation and technical expertise to UK businesses, researchers and local organisations. This will help make the UK a global centre for smart energy systems – increasing efficiency, cutting bills and carbon, and creating more high value jobs.

Modern Energy Partners

Delivering tools and techniques to help campus-scale sites make informed decisions in scoping, installing and operating sophisticated energy transformation solutions that maximise the benefit to both the site and the wider energy system.

CATAPULT

Energy Systems

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